

WHAT IS CLAIMED IS:

1. A remote virtual network interface, comprising:
  - an Ethernet receiving element in communication with an Ethernet node;
  - an Ethernet transmitting element in communication with the Ethernet node;
  - an InfiniBand receiving element to receive a data packet from a first InfiniBand node, wherein the data packet includes a destination indicator;
  - a detector to read the destination indicator and to compare the destination indicator to a known value; and
  - a routing element to deliver the data packet from the InfiniBand receiving element to an InfiniBand transmitting element, wherein the InfiniBand transmitting element transmits the data packet from the first InfiniBand node to a second InfiniBand node.
2. The remote virtual network interface according to claim 1, wherein the destination indicator is a destination media access control ("MAC") address.
3. The remote virtual network interface according to claim 1, wherein the known value is a range of media access control ("MAC") addresses.
4. The remote virtual network interface according to claim 1, wherein the detector and the routing element are within a single device.

1        5.        The remote virtual network interface according to claim 1, wherein the  
2        remote virtual network interface is virtualized by implementing microcode in a  
3        network processor.

1        6.        The remote virtual network interface according to claim 1, wherein the  
2        remote virtual network interface is virtualized by implementing microcode in a set  
3        of integrated circuits.

1        7.        A network system, comprising:

2                an Ethernet node to receive a first data packet from a remote virtual  
3                network interface;

4                an Ethernet switch to select the Ethernet node to receive a second data  
5                packet;

6                a first InfiniBand node to transmit a data packet to the remote virtual  
7                network interface, wherein the data packet includes a destination indicator; and

8                an InfiniBand switch to select a second InfiniBand node to receive the data  
9                packet from the first InfiniBand node, wherein the remote virtual network interface  
10                includes

11                an Ethernet receiving element in communication with the Ethernet  
12                node,

13                an Ethernet transmitting element in communication with the  
14                Ethernet node,

15 an InfiniBand receiving element to receive the data packet from the  
16 first InfiniBand node,  
17 a detector to read the destination indicator and to compare the  
18 destination indicator to a known value,  
19 a routing element to deliver the data packet from the first InfiniBand  
20 node to the second InfiniBand node, and  
21 an InfiniBand transmitting element to transmit the data packet from  
22 the first InfiniBand node to the second InfiniBand node.

8. The network system according to claim 7, wherein the destination  
indicator is a destination media access control ("MAC") address.

9. The network system according to claim 7, wherein the known value is a  
range of media access control ("MAC") addresses.

10. The network system according to claim 7, wherein the detector and the  
routing element are within a single device.

11. The network system according to claim 7, wherein the remote virtual  
network interface is virtualized by implementing microcode in a network  
processor.

12. The network system according to claim 7, wherein the remote virtual network interface is virtualized by implementing microcode in a set of integrated circuits.

13. The network system according to claim 7, wherein the first data packet and the second data packet are same.

14. A method of routing a data packet from a first InfiniBand node to a second InfiniBand node, comprising:

providing Ethernet connectivity to the first InfiniBand node and to the second InfiniBand node;

receiving a data packet from the first InfiniBand node, wherein the data packet includes a destination indicator;

reading the destination indicator;

indicating by the destination indicator that the data packet is to be delivered to the second InfiniBand node; and

delivering the data packet to the second InfiniBand node.

15. The method according to claim 14, wherein the receiving of the data packet from the first InfiniBand node is performed by a remote virtual network interface.

1 16. The method according to claim 14, wherein the reading of the destination  
2 indicator is performed by a detector.

1 17. The method according to claim 14, wherein the delivering of the data  
2 packet to the second InfiniBand node is performed by a routing element.

1 18. The method according to claim 14, wherein the destination indicator is a  
2 destination media access control ("MAC") address.

1 19. The method according to claim 14, wherein the indicating by the  
2 destination indicator that the data packet is to be delivered to the second  
3 InfiniBand node is performed by comparing the destination indicator to a known  
4 value.

1 20. The method according to claim 19, wherein the known value is a range of  
2 media access control ("MAC") addresses.

1 21. The method according to claim 14, wherein the method further includes  
2 virtualizing the remote virtual network interface by implementing microcode in a  
3 network processor.

1        22.    The method according to claim 14, wherein the method further includes  
2        virtualizing the remote virtual network interface by implementing microcode in a  
3        set of integrated circuits.

1        23.    A program code storage device, comprising:  
2        a machine-readable storage medium; and  
3        machine-readable program code, stored on the machine-readable storage  
4        medium, the machine-readable program code having instructions to  
5        provide Ethernet connectivity to a first InfiniBand node and to a  
6        second InfiniBand node;  
7        receive a data packet from the first InfiniBand node, wherein the  
8        data packet includes a destination indicator,  
9        read the destination indicator,  
10       indicate by the destination indicator that the data packet is to be  
11       delivered to the second InfiniBand node, and  
12       deliver the data packet to the second InfiniBand node.

1        24.    The program code storage device according to claim 23, wherein a remote  
2        virtual network interface receives the data packet from the first InfiniBand node.

1        25.    The program code storage device according to claim 23, wherein a  
2        detector reads the destination indicator.

1 26. The program code storage device according to claim 23, wherein a routing  
2 element delivers the data packet to the second InfiniBand node.

1 27. The program code storage device according to claim 23, wherein the  
2 destination indicator is a destination media access control ("MAC") address.

1 28. The program code storage device according to claim 23, wherein the  
2 instructions to indicate by the destination indicator that the data packet is to be  
3 delivered to the second InfiniBand node are performed by comparing the  
4 destination indicator to a known value.

1 29. The program code storage device according to claim 28, wherein the  
2 known value is a range of media access control ("MAC") addresses.

1 30. The program code storage device according to claim 23, wherein the  
2 remote virtual network interface is virtualized by implementing microcode in a  
3 network processor.

- 1        31.    The program code storage device according to claim 20, wherein the  
2        remote virtual network interface is virtualized by implementing microcode in a set  
3        of integrated circuits.